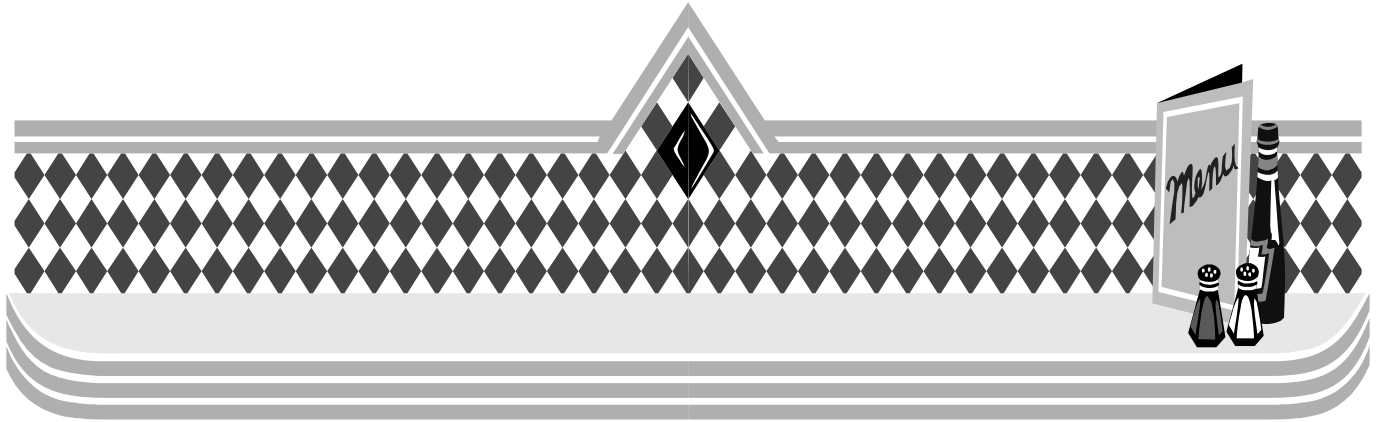


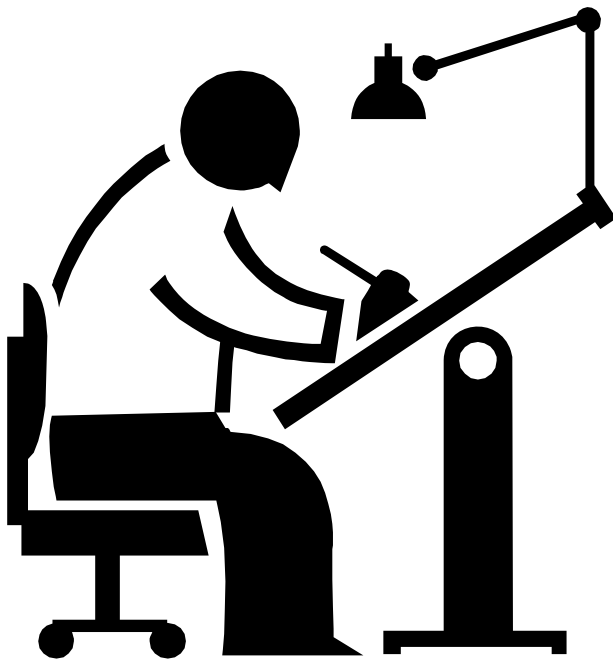
**Packet 1 of 2  
(Informational Packet)**



**PLAN REVIEW  
PROCEDURES**

for

**FOOD  
ESTABLISHMENTS**



ENVIRONMENTAL HEALTH SERVICES  
Formatting and Designs provided by the Maricopa County  
Environmental Services Department

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## Purpose

These two packets are for the use of architects, building contractors, owner/operators and any other individuals involved in the design, construction and operation of any facility regulated by the Coconino County Health Department. What we have provided here are guides that include requirements and recommendations for permitted facilities in Coconino County. These packets are based on the Coconino County Food Code and various trade regulations and are not all inclusive.

These packets will provide the best information on facility construction, in accordance with Health Code Requirements, and will provide an efficient, low maintenance facility.

Plans and Specifications must be submitted, reviewed and approved:

1. Before starting construction; and
2. When a new establishment is being constructed; and
3. When an existing establishment (i.e. "licensed") is reconstructed, remodeled, renovated, expanded; and
4. When an existing structure (previously "unlicensed") is reconstructed, remodeled, renovated, expanded (i.e. 'tenant-improvements').

Sometimes, when changes are 'minor', an informal plan review is possible. "Minor" is not defined in the food code, but is a decision made by the assigned District Inspector. If you believe your project involves 'minor' changes, contact the assigned District Inspector or their Supervisor. You may contact our Support Staff at (928) 679-8750 for "District Assignments" or for the Supervisor.

## Development Requirements

In addition to our Department, other agencies may be involved before you begin your construction process.

**Zoning:** Contact the Planning Department of the City which has jurisdiction over your project for zoning requirements. If the project is located in the unincorporated area contact County Community Development at (928) 679-8850.

**Building Permits:** Contact the Building Department of the City which has jurisdiction over your project for building permits. If the project is located in the unincorporated area contact County Community Development at (928) 679-8850.

**Water Systems:** Is there an approved water system for your project? Contact the Arizona Department of Environmental Quality (ADEQ) at (928) 779-0313 and/or the Certified Water Operator.

**Wastewater Systems:** Is there an approved wastewater system for the facility? Contact Coconino County Environmental Quality for some onsite wastewater systems in unincorporated areas at (928) 679-8772 or ADEQ at (928) 779-0313 and/or the certified operator.

**Fire Suppression Systems:** Determinations about fire suppression systems will generally be made by building departments, fire departments, or the State Fire Marshall depending upon location and assigned jurisdictions.

**Liquor License:** Is there an approved liquor license for the facility (if applicable), or is there a requirement for a liquor license? Contact the Arizona Department of Liquor Licenses and Control at (928) 556-2208.

It is strongly recommended that these baseline issues be addressed before your formal submittal for health code review, in the event that any might be limiting/prohibiting to the project. A license to operate is dependent upon these issues, regardless of an otherwise successful plan review exercise.

Please see Packet 2 of 2 (The Application Packet) under “Development Requirements” and provide the requested information.

# **The Plan Review Process**

## **Step 1 – Submittal of Plans and Specifications**

1. Submit packet 2 of 2 “The Application Packet” with all the appropriate sections filled out. Note that the application for the “Approval to Construct, Alter, Remodel, and Improve” form must have a minimum of one (1) signature by a responsible party.
2. Fees – Submit appropriate fees (see fee schedule and definitions in packet 2 of 2 “The Application Packet”). Fees apply to license categories, so there may be more than one fee per project (example: a Bar and a Restaurant within the same structure).
3. Submit a site plan (if never licensed previously); floor plan; equipment plan; plumbing plan with water, wastewater, and gas distributions; finish schedules for walls, floors, ceilings, and casework; and specification sheets on all food equipment (not just manufacturer and model numbers). Some information on ventilation, lighting, doors and windows must be verified in the process also, and these can be submitted as additional documents. Note: In so far as there are assigned Building Department jurisdictions for most properties within Coconino County which do complete U.P.C. (Uniform Plumbing Code) and U.M.C. (Uniform Mechanical Code) reviews, our Health Code review will normally not duplicate their exercise, but only overlap said reviews relative to certain Food Code requirements.

## **Step 2 – Review and Approval to Construct Pending**

1. When all items above have been received by our office, they will be logged in and dated; “First-Come/First-Serve Basis”. Submittals may be sent by mail, delivered in-person, or brought to a scheduled “Joint-Review” session with the plans examiner. The “Joint-Review” option is preferred to expedite the review and approval process.
2. There is only one (1) plans examiner for Health Code reviews, compared to one (1) or more examiners in each of the County’s six (6) Building Departments. Advance planning and submittal are therefore critical if turn around time is important to the project, and why we recommend a scheduled “Joint-Review” approach. The overall time frame allowed by the Health Code for the Approval of Plans and Specifications is 90 days. This includes 30 days to insure that all the proper materials have been submitted and 60 days to insure a complete review. In reality, reviews very seldom, if ever, require this much time.
3. Upon completion of an acceptable submittal and review an “Approval to Construct Pending” letter will be issued which authorizes the submitter to begin construction. The letter may or may not require plan changes and/or re-submittals.

### **Step 3 – Inspections and Approval of Construction**

1. “During Construction” – Current staffing and County size greatly restrict construction-phase inspections, but they can be scheduled in advance to deal with questions, unforeseen issues, or develop checklists of work to be completed.
2. “Final Inspections” – Inspections are required to verify code compliance and adherence to approved plans; must be scheduled a minimum of five (5) County working days in advance. Time must be allowed to correct any possible deficiencies and schedule required follow-up inspections. For “Final Inspections”, the facility must be “Turn-Key” status with all utilities approved and operable for testing of refrigeration equipment, water, ventilation, lighting, etc. It is also highly recommended that at least one (1) “operations” person be present for the “Final Inspection”. In addition, you will be required to provide evidence that the proper permits and approvals were obtained from other concerned agencies at the “Final Inspection”.
3. Building Department “certificates of occupancy” and/or other approvals are not an approval to operate from the Health Department. Concerning existing “licensed” operations, it may be necessary to discontinue ongoing operations during construction; or for there to be temporary facilities/barriers installed to protect on-going operations. In any event, an approval to operate or to continue existing operations comes from the Health Department.
4. Once approval has been granted an application for a license must be filled out and submitted with the appropriate fee. In most cases this application and fee are collected at the “Final Inspection”. These applications are included in packet 2 of 2, “The Application Packet”.

## **The Menu**

Plan review cannot begin until a specific menu (and specific information related to the menu) is established. Decisions about adequate refrigeration, ventilation, number and types of sinks, equipment location, etc. all begin with the menu and associated activities. It is the menu that will determine how much physical space is needed for storage, walkways, etc. It is the associated activities required for the menu that determine whether or not sinks are needed for food preparation, whether or not one (1) or several hand wash sinks will be needed, etc.

Trying to squeeze an acquired physical space to accommodate a menu is usually an exercise in designing violations of the Food and Drink Codes into an establishment. The menu, instead, determines how much space and what type of equipment will be needed. "How do I make this 3000 square foot space fit my menu..." is the wrong question. "What will I need to have this menu and associated activities..." is the right question.

Please see Packet 2 of 2 (The Application Packet) under "The Menu" and provide the requested information.

## Plumbing

For most properties within Coconino County, there is a Building Department jurisdiction which will do a complete Uniform Plumbing Code (UPC) review, and the Health Code review will only overlap in certain specific areas. Decisions about the number of restrooms, restroom fixture numbers, and A.D.A. requirements will remain a function of the Building Department review. Grease trap/interceptor decisions are made by a variety of jurisdictions throughout Coconino County, and are only made by this office (Environmental Quality) when the property is served by an “onsite” waste-disposal system that it has jurisdiction over.

### Sinks

1. There shall be at least one (1) service sink (mop sink) for each floor level which will be equipped with hot and cold running water, under pressure, with a mixing faucet and approved backflow prevention. Janitorial stations should be conveniently placed for maintenance of the establishment. They should be separate from food and beverage preparation and storage areas. The janitorial station must be accessible for use during operation. Include either a floor basin or a leg-mounted mop sink. A concrete or ceramic tile curbed basin may be used. The minimum size of the basin must be 3 feet square and the curbing at least 4 inches high and 4 inches wide. Connect the basin or sink, with a drain, to the sanitary sewer.
2. For dishwashing, there will be at least a three (3) compartment sink with two (2) drain-boards or dish tables which will be sanitation underwritten, have hot and cold running water and be used only for dishwashing. The sink will accommodate all equipment and utensils needing dishwashing.
3. At least a three (3) compartment sink with two (2) drain boards is required for emergency backup when an operation proposes using an automatic dishwasher. The sink will accommodate all equipment and utensils needing dishwashing.
4. Hand wash sinks (in addition to those in the restrooms) will be provided that are convenient and accessible to all food preparation, dish wash and food dispensing areas. The number will vary with the floor plan and layout of both equipment and activities. It is not just a function of horizontal distance. Each hand sink will provide hot and cold running water out of a mixing faucet. The hot water will have a minimum temperature of 110°F. Metered faucets will remain open a minimum of 15 seconds. Hand sinks will be used for hand washing only. In bars, where ice is handled or manual washing, rinsing and sanitizing of glassware is done, a separate hand washing sink is required.
5. Provide a supply of dispensed, hand cleaning soap and a supply of dispensed paper towels at each kitchen, bar and restroom hand wash sink. The use of common cloth towels is not allowed. Hand drying devices using air are not allowed in food preparation, service or bar areas. Hand sanitizers or gloves may be used in addition to conventional hand washing, but never as a



6. Splash guards are needed when a hand wash sink is within 24 inches of a food contact surface, food/utensil storage shelves, food service areas, vegetable preparation sink or dish washing sink. Install a waterproof splashguard at least as high as the faucet and as wide as the hand sink, between the sink and food/dish related areas. We recommend the use of stainless steel. Securely fasten splashguards to the wall, counter top or sink. Seal the seam created by the splashguard with silicone.
7. Separate food-prep sinks will be provided if the operation uses sinks to prepare foods. Examples would include the washing of vegetables or the thawing of frozen foods. Food-prep sinks must be indirectly connected via an air-gap, sanitation underwritten and be used only for food preparation.
8. Sewer-connected sinks for all outdoor cleaning if an operational requirement exists. Examples would include can-wash, mats and duckboards or when a water service is provided at a solid waste storage area. There may or may not be a requirement for a grease trap/interceptor depending upon jurisdiction within the County.

### **Indirect Wastes**

1. All equipment holding food or beverage that is equipped with a drain line must be drained indirectly to the sewer (air-gap in most cases), such as ice making, dispensing and storage equipment, condensate lines from refrigeration equipment (unless evaporative disposal of condensate), food prep sinks, beverage-dispensing equipment, espresso machines, wok grills, etc. The air-gap must be two (2) times the diameter of the drain pipe or a minimum of one (1) inch.
2. Floor sinks, floor drains and trough drains must not be installed within walk-in refrigeration units for food service applications.
3. Floor sinks/floor drains must be installed flush with floor finish so as to remain accessible for cleaning (example not covered by hard to move equipment).

### **Conduit Installation**

1. In restrooms, food preparation and dish wash areas, all piping must be concealed within the substructure of the building to as great an extent as possible, except for stub-outs to fixtures, and unless prohibited by law (an example would be gas lines). Any exposed lines in these areas must be pre-approved, and will have to be installed a minimum of  $\frac{3}{4}$  of an inch away from wall and ceiling surfaces, and at least six (6) inches above the floors. Any hangers and brackets will have to be of an easy-to-clean design.
2. All structural penetrations by conduits that lead to inaccessible areas must be sealed; walls, ceilings, chases, etc. You can use escutcheon plates, trimmed foam, caulking, etc.

Please see Packet 2 of 2 (The Application Packet) under “Plumbing Schedule” and provide the requested information.

**“Handsinks”:**

- all prep areas
- all dishwash areas
- all food dispensing areas  
(in addition to those in restrooms)



**“Service Sink”:**

Minimum of 1



**Minimum for Dishwashing :**

3 Compartment Sink with 2 Drainboards

- Sanitation Underwritten Equipment
- Size dependent upon the biggest items to be cleaned, & their volume.



**“Prep Sinks”:**

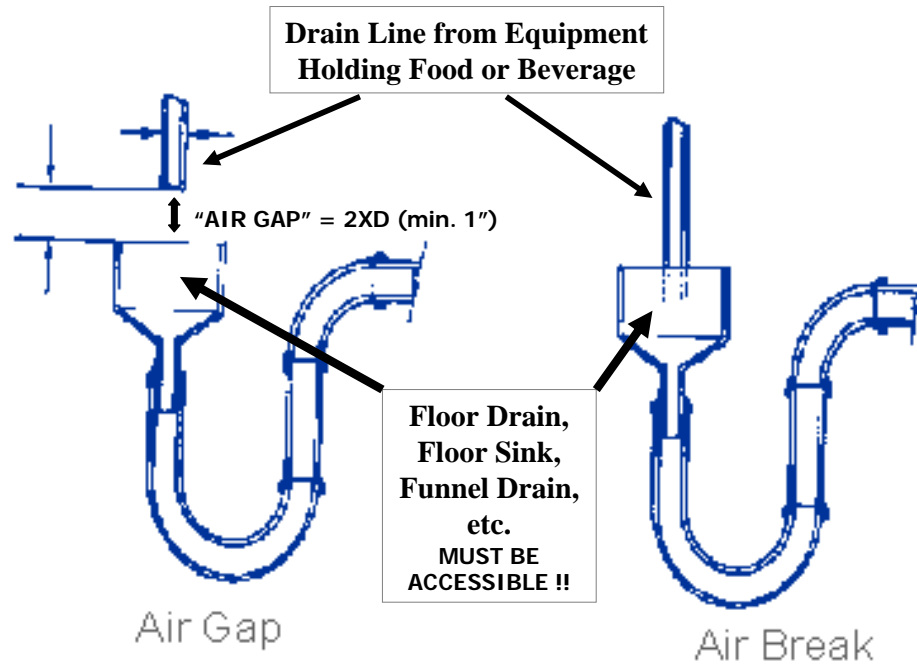
“Menu-Dependent”

- Required when sink(s) used for any food prep
- Sanitation Underwritten Equipment



"Air Gap" prevents back-flow, & contamination of discharge line.

"Air Break" prevents back-flow.



## Indirect Waste

"AIR GAP" = 2XD (i.e. 2X the diameter of the discharge line, OR minimum 1 inch) !!

Install according to local building authority

## **Food Equipment**

Food equipment includes all food and beverage equipment and associated shelving, dishwashing equipment, hoods, food preparation sinks, walk-in refrigeration equipment, air curtains, casework (cabinets, counters), tables and chairs, transport equipment, etc.

All food equipment must be sanitation underwritten by an A.N.S.I.-affiliated laboratory. A specification sheet must be provided for each item which includes a verification of sanitation approval. Any used equipment must be so identified, must be in good condition and must meet the most current sanitation standards (Note: alterations to equipment may result in said equipment being disapproved).

Any changes to equipment, if any, must be pre-approved by additional submittal and review. Some used equipment, while previously sanitation approved, may not meet current sanitation standards and may be rejected even though they are in good condition (i.e. galvanized hoods are no longer approved, refrigeration equipment must meet the newer 41°F product-temperature criterion, etc.).

Refrigeration equipment must be sanitation approved not only for design and construction, but also for specific operational use (i.e. most underwritten “merchandizer” equipment is only approved for pre-packaged and/or bottled products, not for foodservice applications).

Equipment such as counters, cupboards, dining tables, and shelving not utilized for direct food contact (or closely associated contact), do not require a sanitation underwriter, but descriptive shop drawings and/or specifications must be provided to verify that design and construction provide smooth, nonabsorbent, durable, and easy-to-clean finishes when located in food preparation areas, food dispensing areas and dishwashing areas.

## **Specialty Equipment**

1. Cold Plates: When installed in ice bins, the cold plates must be an integral part of the bin. Drop-in cold plates are not allowed. The cold plate and beverage lines must not be in contact with the beverage ice.
2. Dipper Wells: Provide dipper wells with running water where you dispense bulk ice cream. Also, consider using dipper wells with dispensing utensils for other bulk foods such as cooked rice, whipped butter, etc.
3. Garbage Grinders: Garbage grinders may be installed at pre-rinse sinks only. Do not install garbage grinders on food preparation sinks.
4. Fryers: Recommend splash guards on the sides of deep fryers.

5. Microwave Ovens: Commercial grade and domestic microwave ovens are approved for food service.
6. Sneeze Guard/Food Shield Design: Salad bars, buffets, serving lines and sneeze guards shall comply with the Standards of an ANSI accredited certification program and/or meet Departmental approval. Sneeze guards shall be constructed of approved durable materials such as tempered glass, plexi-glass, plastic, stainless steel or other finished metal supports and shall be easily cleanable. The food shield should intercept a direct line between the customer's mouth/nose area and the food on display. On average, the vertical distance from the customer's mouth to the floor is 4' 6" to 5 ft. Closed ends or side panel protection is required for all sneeze guards to ensure proper food protection. The maximum height from the floor to the shield is 54". This average must be adjusted for children in educational institutions (i.e. elementary schools) and for other special installations to accommodate the wheel chair bound. The counter height should be 34" to 36" to provide a 12" to 14" food zone in adult self-service areas. Counter heights in elementary school food self-service areas shall have a 27" to 29" counter height. Counter heights may be less than 30" to accommodate chafing dishes, etc., but food shall be protected within the food zone. Clean dishes and utensils shall be stored in a clean, dry location where they are not exposed to splash, dust or other contamination at salad bars, buffet lines, serving lines, etc. All sneeze guard/food shields will require an on-site inspection to verify that they meet Departmental approval. From a height of 4' (54") the sneeze guard should extend sufficiently at a 45° angle down to intercept the mouth/nose area of an averaged height person. A properly designed food shield will provide protection under/behind the sneeze guard from the mouth/nose area for all food in the food zone.
7. Table-Mounted Equipment: Install table-mounted equipment on 4-inch legs, or seal the equipment to the table using silicone caulk, unless it is easily movable. Easily moveable equipment must: a) be less than 30 lbs. (14 kg) or on casters, gliders or rollers; b) have no utility connection or have a quick disconnect utility connection. Maintain pieces of table-mounted equipment at least 6 inches apart to facilitate cleaning access.
8. Floor-Mounted Equipment (Movable): The preferred method of installation is to place equipment on casters, gliders or rollers. Use coated steel, commercial grade, NSF approved, utility connections that are smooth and flexible with quick disconnects. The connections must be long enough to move the equipment so the area around can be cleaned. Equipment may be elevated on legs, as long as a minimum 6-inch clearance between the floor and equipment is provided. Floor mixers may be elevated to provide at least a 4-inch clearance between the floor and equipment.

9. Floor-Mounted Equipment (Fixed): Install stationary equipment with sufficient space between adjacent equipment, floors, walls, cabinets and ceilings to facilitate proper cleaning. Maintain 8 inches of spacing when the area to be cleaned is less than 4 feet long and 18 inches when the area is greater than 4 feet. If sufficient space is not possible between, behind and above each piece of equipment, or if the space between such equipment is greater than 1/32 inch, the spaces must be sealed. Use 100 percent silicone caulk or cleanable trim/flushing to seal spaces. Seal all gaps, cracks, voids, protrusions, and penetrations using silicone caulk or trim that meets the finish material standard. The silicone bead must be smooth and coved. Conceal all plumbing, electrical and gas lines in walls or ceilings, whenever possible. Otherwise keep all exposed lines at least 6 inches above floor level and at least 3/4 inch away from walls and ceilings. Conduits or pipes shall not be installed across any aisle or high traffic area.
10. Walk-in Coolers: Walk-in refrigerators, freezers or other large equipment, with spaces 30 inches or less between the top surfaces of the equipment and the ceiling require flashing or closing off in a clean, tight and vermin proof manner. Flash, trim or caulk spaces between walk-in refrigerators and adjacent walls.

Please see Packet 2 of 2 (The Application Packet) under "Food Equipment" and provide the requested information.

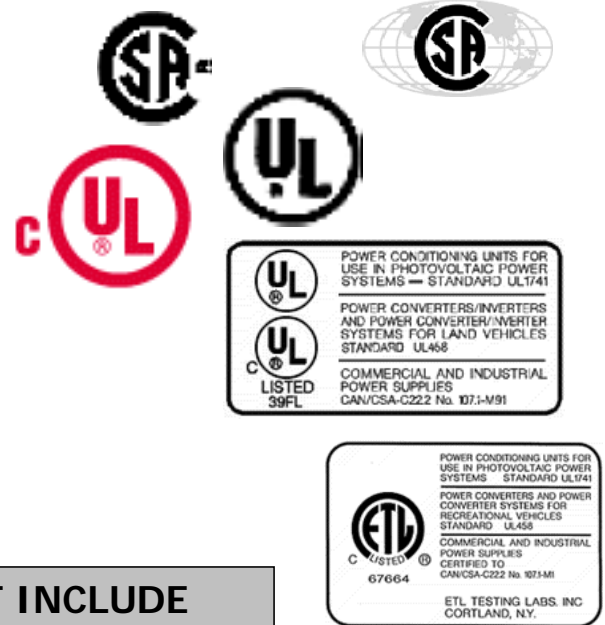
# EQUIPMENT SANITATION STANDARDS

**MUST be “Underwritten” by ANSI-Affiliated Lab !!!**

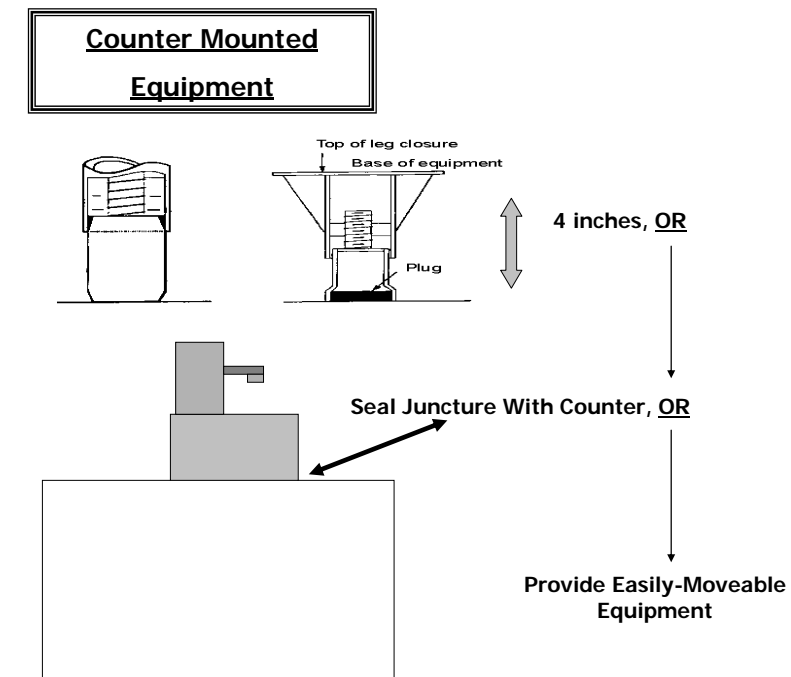
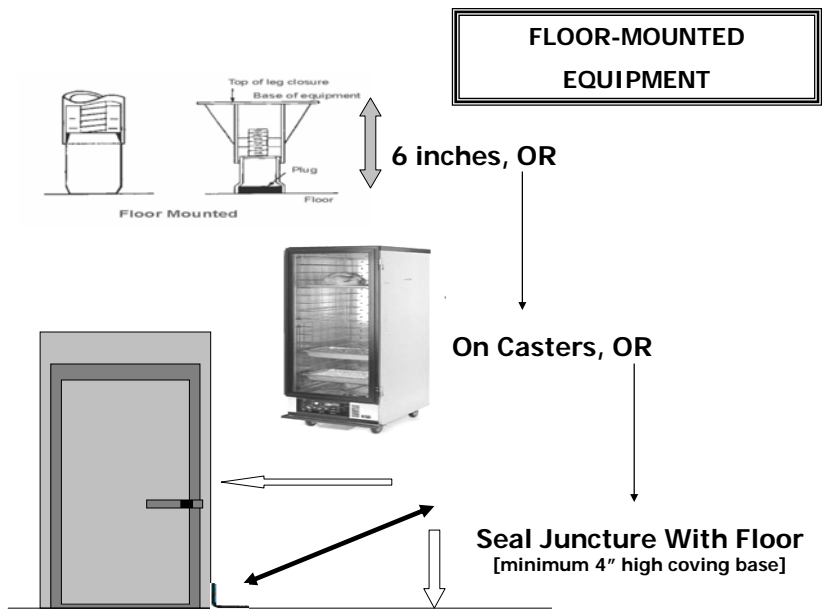
- **THESE (examples only) :**



- **NOT THESE:**

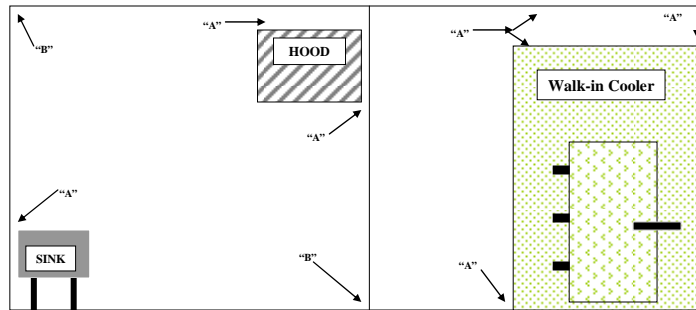


**\*\* PLANS MUST INCLUDE SPECIFICATION SHEETS !!**



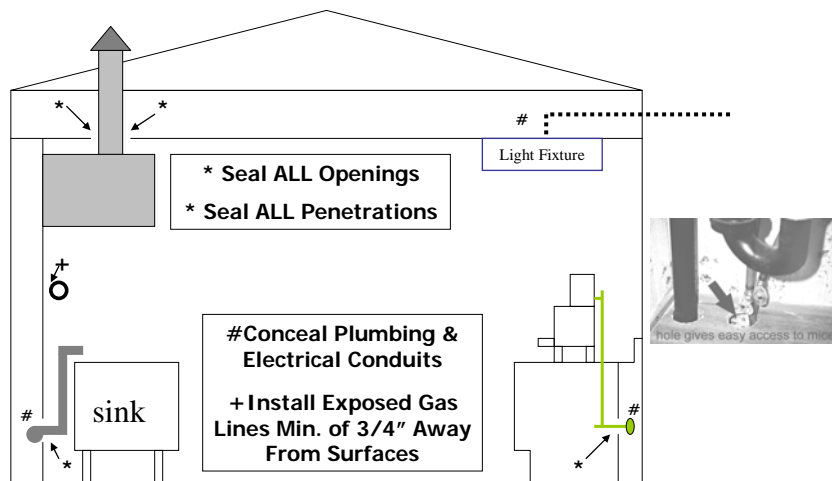


**"Tight" Construction: For Pest Control, To Facilitate Cleaning**



"B" = Wall/Ceiling, Wall/Wall, Wall/Floor Junctions Sealed  
 "A" = Junctions Between Fixed Equipment and Walls, Floors, Ceilings or other Fixed Equipment Either Sealed Or Space-Gapped Enough To Allow Easy Access to All Areas

\*\*No Greater Than  
 1/32 Inch  
 Openings



**"Tight" Construction: For Pest Control, To Facilitate Cleaning**  
 1. Seal all openings (all interior areas); &  
 2. Conceal conduits within substructure except where prohibited by law.

## **Finishes**

### **Walls**

Provide a smooth, nonabsorbent, easily cleanable surface that is light in color. Skip trowel finish is not acceptable. Raw wood or unfinished studded walls are not permitted. We do not recommend textured drywall surfaces. Walls shall be constructed with material that leaves a smooth finish such as stainless steel, approved FRP (Fiberglass Reinforced Panel), ceramic tile, painted dry orange peel textured wall, etc. All splash areas must be finished with durable and waterproof materials such as FRP or stainless steel. Painted dry wall in splash and moisture related areas are not acceptable.

Painted wall surfaces in all food service and ware washing, storage and restroom areas should be smooth and light in color. Use a quality high gloss enamel type paint. A maximum 25% random pattern or band of darker colored wall finishes are recommended in customer related areas such as bars and restrooms.

Wainscoting in all establishments must meet the same requirements as kitchen areas. Grout shall be smooth and finished flush with the surface of all tile.

Wall finishes behind cook lines and under vent hoods shall be of stainless steel or its equivalent. Wall surfaces from lower edge of kitchen exhaust hoods to the floor surface including the wall/floor junctures shall be finishes with coved metal, coved ceramic tile, or other similar durable, easily cleanable materials.

Construction masonry units (CMU), brick and other masonry units installed as a finish material shall be free of pits, voids, cracks, depressions and shall be smooth and easily cleanable. Light colored astra-glaze-sw® glazed masonry units are acceptable.

FRP must be light in color and easily cleanable (Pebble surface or Smooth surface). Grooved and/or painted FRP panels are not approved.

Finish faced medium density fiberboard (MDF) backed panels are acceptable in non-moisture related areas only. However, the material is not recommended and not approved in moisture related areas due to durability concerns.

### **Floors**

Floor finishes shall be commercial grade, durable, smooth, non-slip, nonabsorbent, grease resistant and easily cleanable. The use of poured monolithic floors may require specific approval for kitchen applications. Carpet is not allowed in any food prep, storage, service, refuse areas, restrooms or utensil washing areas. Carpet approved by this office is permitted in customer areas and prepackaged retail areas.

Concrete floors shall be smooth, and have all expansion joints, saw cuts and cracks properly filled. We recommend at least three (3) feet Vinyl Composition Tile (VCT) or washable surface around perimeter of retail reach-in cooler units. Grout shall be smooth and finished flush with the surface of the tile and non-absorbent.

Samples may be submitted for prior approval.

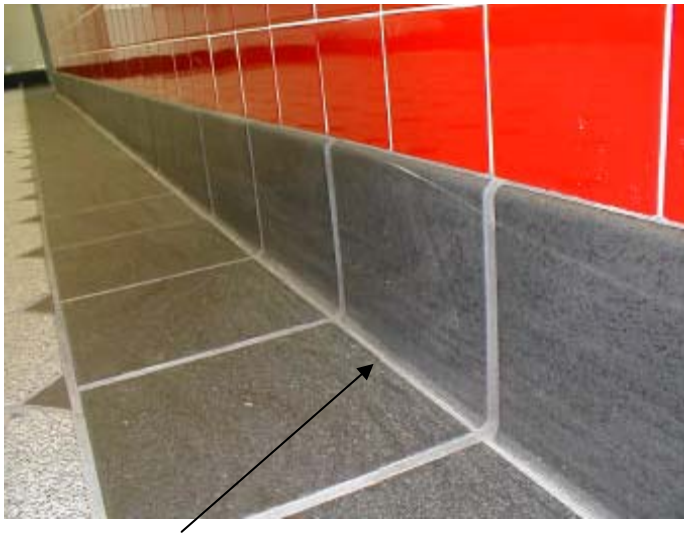
## **Ceilings**

Provide smooth, non-absorbent, easily cleanable and light-colored ceiling surfaces that can withstand frequent cleaning. Exposed joists, studs or other support structures will not be accepted. Acoustical ceiling tiles are not permitted in restrooms, kitchens, mop sink areas or high moisture related areas.

## **Coving**

Provide a smooth, coved base ( $\frac{3}{8}$  inch radius or greater) at the juncture of walls and floors. Coved bases are required at the juncture of cabinets and floors. Examples of acceptable materials for coved base are four (4) inch vinyl or rubber, ceramic or quarry tile and stainless steel.

Ceramic tile used as coving shall not be installed on top of floor tiles at floor/wall junctures. The floor/wall juncture shall be a true flush cove base with at least a  $\frac{3}{8}$  inch radius or greater.



**Flush  $\frac{3}{8}$ " radius**

Concrete curbs in a walk-in cooler/freezer shall be finished smoothly, properly coved with  $\frac{3}{8}$  inch or greater, beveled away from the wall at the top edge and thoroughly sealed. Rubber/vinyl cove base is not permitted inside walk-in cooler/freezer units.

## **Shelving, Woodwork, Millwork and Countertops**

All wood shelving or woodwork shall be sanded smooth, free of open joints and sealed or painted to a smooth, final finish. All wood edges shall be smooth and easily cleanable. No raw wood is permitted. All raw wood must be sealed or painted. Countertops shall be smooth and easily cleanable, impervious to moisture, free of cracks, crevices. Food contact surfaces shall be stainless steel or NSF approved. Formica, Melamine, laminated shelving or similar surfaces are not permitted in food preparation, storage or ware washing areas.

## **Walk-in Refrigerator and Freezer Units**

Walk-in refrigerator and freezer walls, ceilings and floor/wall junctures shall be metal or equal and properly coved. Flash, trim or caulk spaces between walk-in refrigerators and adjacent walls. Walk-in refrigerators and freezers with spaces 30 inches or less in height between the top surfaces and the ceiling may require flashing or closing off in a clean, tight vermin proof manner. We recommend that all walk-in coolers be flashed off to ceiling.

We recommend the installation of screeds so that you have an effective  $\frac{3}{8}$  inch radius cove on both the interior and exterior of the unit. Other approved methods include a grout radius as an integral part of the flooring material or corrosion-resistant metals.

Because of separation problems, vinyl cove base is not acceptable in walk-in units. Due to breakage and separation concerns, we do not recommend the installation of ceramic or quarry tile as coving in walk-in units. Galvanized metal will rust when installed as a finish in a walk-in cooler. It is not recommended. Stainless steel is the preferred material.

## **Bar, Server and Wait Stations**

Bars, server and wait stations, or areas extending from the kitchen must utilize the same finishes as the kitchen. Also, the interior walls of radius counter surfaces (i.e. radius bar counters) should be constructed flat to allow equipment to be sealed to the walls.

## **Dining Room**

Generally, dining room finishes are not regulated. However, we recommend that if carpeting is used as a floor covering, it should be of durable, closely woven, stain resistant material, properly installed, cleaned and maintained in good repair.

## **Beverage Stations, Salad Bars and Buffets, Server and Wait Stations**

*Floors:* The floor finishes must be of durable, waterproof, grease-resistant, cleanable materials extending sufficiently from the serving side (s) of the beverage stations, salad bars, and buffets.

*Coving:* A 3/8-inch base coving must be provided at the juncture of the floor and wall or cabinet base.

*Walls:* The walls in these areas shall be light in color, smooth, non-absorbent, and easily cleanable. Skip trowel finishes are not acceptable.

*Ceilings:* The same finish as the dining room may be used in these areas, except that splash and moisture related areas require the installation of smooth, non-absorbent and easily cleanable materials.

## **Multiple Use Areas**

Multiple use areas must meet the more stringent requirements imposed on that area. Clearly define the finishes in these areas for final approval by an inspector.

## **Outdoor Areas**

The outdoor walking, dumpster and driving areas shall be surfaced with concrete, asphalt, or gravel or other materials that have been effectively treated to minimize dust, facilitate maintenance and prevent muddy conditions.

## **Summary of Finishes and Additional Recommendations**

*Floors:* Quarry or ceramic tile, poured epoxy and sealed concrete is preferred flooring because of their durability. Vinyl composite tile (VCT) is acceptable but not recommended due to deterioration over time. The use of diamond-plate steel or corrosion-resistant aluminum as flooring under beer kegs, or where durability is essential, should be considered.

*Walls:* Stainless steel, FRP, and ceramic tile meet the standard for durability and being waterproof in splash areas. Oil-based epoxy paints are appropriate in food preparation areas. We recommend stainless steel corner guards in high-traffic areas. Skip trowel finishes are not acceptable.

*Ceilings:* Install smooth, washable tiles, such as, vinyl faced tiles in suspended ceilings. Drywall painted with a high-gloss, washable finish is acceptable.

No perforated, fissured or other textured surfaces are allowed.

All wall-to-wall, wall-to-floor and wall-to-ceiling junctures shall be sealed.

The following chart provides acceptable finishes for floors, walls and ceilings by area:

	<b>Floor</b>	<b>Wall</b>	<b>Ceiling</b>
Cooking Area	Quarry tile, poured seamless, sealed concrete	Stainless Steel; aluminum; Ceramic tile	Plastic coated or metal clad fiberboard; Dry-wall epoxy; Glazed surface; Plastic laminate
Food Prep Areas	Same as above plus commercial grade vinyl composition tile	Same as above plus approved wall panels (FRP) Fiberglass Reinforced Panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Same as above
Bar	Same as above	Same as above for areas behind sinks	Meets building codes
Food Storage	Same as above plus sealed concrete, commercial grade vinyl composition tile or sheets	Approved wall panels (FRP) Fiberglass Reinforced Panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Acoustic tile; painted sheetrock
Other Storage	Same as above	Painted sheetrock	Same as above
Toilet Rooms	Quarry tile; poured sealed concrete; commercial grade vinyl composition tile or sheets	Approved wall panels (FRP) Fiberglass Reinforced Panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Plastic coated or metal clad fiberboard; Dry-wall epoxy; Glazed surface; Plastic laminate
Dressing Rooms	Same as above	Painted sheetrock	Same as above plus painted sheetrock
Garbage & Refuse Areas (Interior)	Quarry tile; poured sealed concrete; commercial grade vinyl composition tile or sheets	Approved wall panels (FRP) Fiberglass Reinforced Panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Plastic coated or metal clad fiberboard; Dry-wall epoxy; Glazed surface; Plastic laminate
Mop Service Area	Quarry tile, poured seamless, sealed concrete	Same as above	Same as above
Ware washing Area	Same as above plus commercial grade vinyl composition tile	Stainless steel; aluminum; approved wall panels (FRP) Fiberglass Reinforced Panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Same as above
Walk-in Refrigerators & Freezers	Quarry tile; stainless steel; poured sealed concrete; poured synthetic	Aluminum; stainless steel; enamel coated steel (or other corrosion resistant material)	Aluminum; stainless steel; enamel coated steel (or other corrosion resistant material)

Please see Packet 2 of 2 (The Application Packet) under "Finish Schedule" and provide the requested information.

# **Lighting**

## **Intensity**

Enough artificial lighting shall be installed to provide a minimum of 20 foot candles (220 lux):

1. Upon all “customer self-service” surfaces.
2. Inside equipment such as reach in refrigerators and under counter refrigerators.
3. At a distance 30 inches from the floor in areas where there is hand washing, food preparation, dishwashing and equipment and utensil storage.
4. At a distance 30 inches from the floor in restrooms.

Enough artificial lighting shall be installed to provide a minimum of 20-50 foot candles (220 – 540 lux) in areas where an employee is working with food and/or equipment and safety is an issue.

Enough artificial lighting shall be installed to provide a minimum of 10 foot candles (110 lux) at a distance 30 inches from the floor in walk-in refrigeration units, dry storage areas and all other areas and rooms not referenced above during periods of cleaning. In “bars”, at least 20 foot candles of light upon all work surfaces (hand sinks, dish wash sinks, jockey boxes, etc.) may be provided without lighting the entire bar area, as long as a minimum of 10 foot candles is provided for periods of cleaning.

## **Shielding**

Light bulbs shall be shielded, coated or otherwise shatter-resistant in areas where there is exposed food, clean equipment, utensils, and linens, or unwrapped single-service and single use articles:

1. Includes light fixtures within food equipment such as salad bars, produce display, refrigeration units, deli cases, etc.
2. Not required where such items are packaged, if the packaging will prevent broken glass contamination and can be cleaned when exposed to broken glass before the package is opened.

In “bars”, shielding will be enforced as described in the first paragraph above.

## **Cleanability**

Light fixtures in food preparation and dish wash areas must be of a design, construction and installation that is easy to clean.

## Ventilation

For most properties within Coconino County, there is a Building Department jurisdiction which will do a complete Uniform Mechanical Code (UMC) review, and the health code review will only overlap in certain specific areas. Decisions about whether or not a hood will be required, what type of hood is required, mechanical requirements, etc. will remain a function of Building Department or Fire Department review.

All rooms from which obnoxious odors, vapors or fumes originate shall be mechanically ventilated to the outside air. Restrooms must be mechanically exhausted to the outside air. Cooking equipment such as stoves, grills, griddles, fryers, broilers, smokers, etc. will generally require a hood. Determinations about fire suppression systems will generally be made by building departments, fire departments or the State Fire Marshall depending upon location and assigned jurisdiction, as well as hood type. Condensate/Vapor Hoods will generally be required for high-temperature automatic dishwashers.

All hoods must be sanitation-underwritten by an A.N.S.I.-affiliated laboratory (i.e. NSF approval). Specification sheets must be submitted which verify the sanitation approval.



## **Doors and Windows**

### **Exterior Doors**

Exterior doors must be tight-fitting (i.e. no light shines through), and self-closing unless other pre-approved insect and rodent control barriers are provided.

Door surfaces exposed to the interior of kitchens and restrooms must be smooth-surfaced, easy-to-clean and washable.

When exterior screen doors are utilized for insect and rodent control, the screening must be no less than 16 grid per square inch.

Emergency exit doors must be tight-fitting, but the self-closing requirement may be waived if said door is always connected to an alarm system.

Double exterior doors must be tight-fitting, but the self-closing requirement may be waived for one of the two doors if said door is not routinely operated and is dead-bolted except for short periods of temporary use.

Rollup exterior doors must be tight-fitting when in the closed position, but the self-closing requirement may be waived if said doors are not opened frequently or for extended periods of time. If left open install an approved air curtain.

### **Interior Doors**

Restroom doors must be self-closing.

All door surfaces exposed to the interior of the kitchen or a restroom must be smooth-surfaced, easy-to-clean, and washable.

Interior doors must be equipped as for an “exterior door” when they open into associated structures/spaces that are not insect and rodent proofed.

### **Exterior Windows**

Exterior windows must be tight-fitting (no light shines through), and either screened or self-closing.

Window surfaces exposed to the interior of kitchens and restrooms must be smooth-faced, easy-to-clean and washable.

Window screens must be no less than 16 grid per square inch.

## **Interior Windows**

Window surfaces exposed to the interior of a kitchen or a restroom must be smooth-surfaced, easy-to-clean and washable.

Interior windows must be equipped as for an exterior window when they open into associated structures/space that is not insect and rodent proofed.

## **Air Curtains and Other Insect/Rodent Control Methodologies**

Air curtains and other insect/rodent control methodologies must be sanitation underwritten, and are supplementary only to the above-noted requirements.

Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device.

Insect control devices should not be located above food preparation areas. Units should be installed so as to prevent contamination of exposed food, clean equipment, utensils and linens, from insect fragments.

Any other proposed methods for insect and rodent control must be pre-approved.

# **Storage**

## **Dry Storage**

Adequate and suitable floor space shall be provided for the storage of food and beverages. In addition to working storage (i.e. wall-mounted shelves and cabinets over food preparation equipment or under counter storage shelves) additional dry-storage space shall be provided.

Storage space should consist of 25% of the food preparation area, or one square foot per seat, whichever is greater, but not less than a total of 100 square feet of floor space.

It is recommended that at least 32 linear feet of shelving units, a minimum of 18 inches deep, should be installed in the minimum 100 square feet of floor space provided. All shelving must be at least 6 inches above the floor with a clear unobstructed area below or an upper shelf surface above a completely sealed minimum four-inch base.

## **Wet Storage**

Storage of packaged food in contact with water or un-drained ice is prohibited. Wrapped sandwiches and wrapped food items shall not be stored in direct contact with ice. All equipment and containers used for the storage of packaged food items in contact with ice shall be designed to allow gravity drainage only of melted ice to a floor sink with an approved air gap.

## **Storage Locations**

1. **Cooking Utensils:** Designate areas for clean cooking utensils, cutting boards, glassware and dishware. Store them at least 6 inches off the floor in a clean, dry location where they will be protected from dust and splash.
2. **Clean Linen:** An area, separate from soiled linens, should be provided, to store and protect clean linen from contamination.
3. **Soiled Linens:** Specify the location of covered, non-absorbent containers or washable laundry bags designated for holding damp or soiled linens, soiled uniforms, aprons, etc.
4. **Chemicals:** Designate an area for toxic materials storage that is away from food and clean utensils. These include detergents, sanitizers, related cleaning or drying agents and caustic acids, polishes and other chemicals. Install cabinets, cages, or physically separate shelves for storing chemicals. Pesticides are not permitted in the establishment. Pest control shall be provided by a properly licensed pest control applicator.

5. Maintenance Equipment: Designate an area, away from food or dishware, for storing maintenance equipment and cleaning supplies. Supply adequate broom racks to keep broom, dust pans, etc., off the floor. Install heavy-duty mop hooks that can support wet mops over the janitorial sink so that wet mops may drip into the sink basin. Provide open wire or solid metal shelving at each janitorial station for a working supply of cleaning items. The use of peg board is not approved.
6. Firewood: If firewood is used, designate an area for firewood separate from food service and storage areas. Provide special measures to ensure insect and rodent control.
7. Shelving: Kitchen shelving must meet NSF standards. Shelves should be constructed of metal or material which has been finished to provide smooth, easily cleanable, non-absorbent surfaces. Shelves subject to heat or moisture must be of rust-resistant metal or plastic. Shelving not approved by NSF may be used for dry storage, provided the particular area used: is a separate room isolated from other food service operations; stores items not consisting of open foods; and has all raw wood sanded smooth, free of open joints and sealed or painted to a smooth non-absorbent finish. Final site approval is required.

All refrigerator and freezer shelving must meet NSF standards. In addition, shelving installed in refrigerators must be made of rust-resistant metal or other impervious material. The minimum height of a bottom shelf above the floor of a walk-in refrigerator or freezer is 6 inches.

# **Employee Areas and Restrooms**

## **Employee Areas**

A coat rack, coat hooks or other suitable facilities for employees to store their clothing and other personal belongings should be provided. Consider installing lockers in a designated area away from food production and storage locations.

If employees change clothes on-site, provide a dressing room where they may change and store their personal, non-working garments. This cannot be in areas used for storing, preparing or serving food, or for washing or storing utensils.

Designate a separate break room away from food preparation and utensil washing areas, if employees are not allowed to eat in the dining room. Provide a speed rack for employee beverage container storage.

Personal medications and first aid kits shall not be stored in food storage, preparation or service areas.

## **Restrooms**

1. Hand Wash Signs: Hand wash signs are required in all restrooms used by employees.
2. Access: Public access to restrooms through food preparation or utensil washing areas is prohibited.
3. Dispensers: Each hand wash sink must have a supply of dispensed soap. Also, provide disposable paper towels. Dispensers must be conveniently located near each hand wash sink. Hand wash sinks for public use may have hot air hand drying devices. If employees share restrooms, provide dispensed, disposable paper towels. Restrooms specifically for employees should be provided with dispensed disposable paper towels only. Hot air hand dryers in kitchens are not recommended.
4. Water Supply: Provide each hand wash sink with hot and cold water by means of a mixing valve or combination faucet. Any self-closing, or meter-faucet used must provide a flow of water for at least 15 seconds without the need to reactivate the faucet. Hot water should be provided within 45 seconds at a temperature of at least 110° F.
5. Refuse containers: Provide containers for the disposal of paper towels.
6. Sanitary Containers: Provide covered sanitary containers for the disposal of feminine hygiene products in women's or unisex restrooms. If diaper-



# **Garbage and Refuse**

## **Garbage Containers**

1. Number: Each establishment is to secure their own garbage. Remember to provide sufficient garbage containers, sized to hold any garbage or refuse in a nuisance-free manner, until it is picked up.

## **Garbage Area**

1. Outside Storage: Place outside refuse containers and compactor systems on smooth, non-absorbent surfaces such as concrete or machine-laid asphalt. Use a concrete pad for storing grease containers. These areas should be as far as possible from the building's doors and windows.
2. Enclosures: If you propose a garbage enclosure, construct it of durable, non-absorbent materials and a washable interior finish able to withstand frequent washing.

# **Outdoor Bars, Outdoor Cooking, Outdoor Facilities and Catering**

## **General**

All equipment, including but not limited to, windows, counter shelves, vats, tables, refrigerators and sinks shall be kept clean and free from dust, dirt, insects, and all contaminating material. All food and drink shall be stored, displayed and served so as to be protected from dust, insects, vermin, depredation and pollution by rodents, handling, droplet infection, overhead leakage, flooding, drainage, coughing, sneezing, inclement weather and other contamination. Effective dust control measures shall be taken in the vicinity of all outdoor food operations. Adequate and convenient hand washing and toilet facilities shall be provided.

## **Outdoor Bars**

Outdoor bar areas are permitted with the following stipulations:

No potentially hazardous foods (i.e. milk, creamers, etc.), food prep, service or storage is allowed

Temporary ice bins shall be provided with closing lids. Ice machines/makers are not allowed outside.

No glassware or utensil washing is permitted. The installation of three compartment sinks or dishwashers is not allowed.

Glassware is prohibited in all pool areas.

Glassware and utensil storage is restricted. Limited use of protected utensils in bar areas is acceptable. Single service use utensils are preferred.

## **Outdoor Cooking**

The permitted establishment must be adequately equipped and capable of cooking/grilling outside in a safe and sanitary manner. In order to cook/grill outside, the food service establishment must have equal or greater cooking/grilling and hot holding equipment inside the establishment.

The site selected and the method of cooking/grilling of food shall be approved by this Department. In addition, approval shall be obtained from the local regulating authority prior to a permit being issued by this Department.

Only the cooking and grilling of food will be allowed outside at permitted establishments. All food preparation must be completed within the permitted facility.



All utensils and equipment used in the outdoor cooking/grilling of food must be returned to the permitted establishment for proper cleaning, except that in place cleaning may be allowed for steamers, grills and other similar equipment. Sufficient quantities of utensils shall be provided to conduct the activity.

Cooking/grilling equipment shall be provided with covers. Covers or lids may be removed only for monitoring, stirring or adding additional ingredients.

All outdoor cooking/grilling equipment, including custom-made equipment shall meet construction standards set forth by this Department. A final inspection and approval of the equipment is required.

When observation or inspection discloses that proper food protective procedures are not employed, such operation shall be discontinued. This includes operating when dusty conditions are prevalent or when other pertinent violations are noted.

### **Outdoor Facilities**

Outdoor facilities shall meet the same regulations noted elsewhere in this construction guide.

### **Catering Facilities**

“Food Catering” refers to any establishment in which preparing food products or food is conducted at a permitted food establishment for service and consumption at another off-site location for a temporary event or other occurrence.

All catering activities must be conducted from an approved and permitted food/establishment/commissary.

Equipment used for the transport, storage and service of food products shall be constructed of approved materials and easily cleanable.

All food products requiring temperature control shall be transported and stored in equipment whose intended use is for such activities.

Any vehicle carrying food and food products shall be constructed equipped and maintained as to protect the purity and the wholesomeness of the transported products and shall conform to the applicable general regulations found in the Coconino County Food Code and this construction guide. Vehicles used in transporting catering equipment and food shall be of a closed type, dust and fly proof. Examples include large enclosed trucks, delivery vans, modified minivans, etc. All shelves used in such vehicles shall be readily removable and easily cleanable.

## Training

The Coconino County Food Code requires that at least one person per shift (or a minimum of two per facility) be trained for food management through the County's Food Managers Course. This course is intended for those persons who are in charge during operations. This is the individual that will be responding to the inspector when they come in for routine operational inspections. A facility may not conduct operations unless there is at least one food manager trained individual available and present. To register for this course contact our office at (928) 679-8750. **Your operation will not be given approval to operate until you can demonstrate that this requirement is met.**

All other food handlers must become certified through the County Food Handlers Course. This service is now available online. You just need a valid credit card. Go to [www.coconino.az.gov](http://www.coconino.az.gov) and look under online services. You can also come to our office at 2500 Ft Valley Road, Building #1, Flagstaff, Arizona and purchase the training materials.